This user manual is for Industrial ultrasonic cleaning tanks.
All cleaning tanks should be handled with care to ensure maximum performance.
Please read and understand this user manual before using your ultrasonic cleaner.

sunflower ultrasonics

# Industrial Ultrasonic Cleaner User Manual

## 1 Care and Safety

Before using your ultrasonic cleaner, please read and thoroughly be aware of safety precautions. Failure to follow them may lead personal injury or property damage.

**To avoid electrical shock:**

· Do unplug from power source before filling or emptying the tank.
· Do keep the control panel and the area around the cleaner clean and dry -- wipe up solution which spills over the tank brim. Water and high voltage can cause electrical shock.
· Do not operate the cleaner without proper grounding.
· Do not remove the grounding prong on the line cord plug.
· Do not disassemble your cleaner -- high voltage inside the cleaner is dangerous.
· Do not immerse the cleaner in water.

**To prevent personal and/or property damage:**

Do not use the product under condition of temperature fluctuate strongly
Where it has high humidity and especially dew
Where vibration or shock is strong
Where corrosive gas or dust exist
Where water, oil or chemicals splash.
Where is easy to cause explosion.

- Do operate the cleaner with a vented cover or no cover.
- Do use water-based solutions.
- Do not ever use alcohol, gasoline or flammable solutions. Doing so could cause a fire or explosion and will void your warranty. Use only water-based solutions.
- Do not ever use mineral acids. These could damage the tank.
- Do not touch the stainless steel tank or cleaning solution--they may be hot.
- Do not place your fingers or hands into the tank for a long time while the cleaner is operating Doing so may cause discomfort and possible skin irritation.
- Avoid contact with solutions and provide adequate ventilation.
- Do not use solutions containing chlorine bleach

Only responsible adults should operate ultrasonic cleaners.

Wear ear protection whilst operating the ultrasonic cleaner.
Failure to carefully follow the points above could void the warranty and
**Failure to carefully follow the points above could void the warranty and cause injury.**

## 2 How ultrasonic cleaner works?

A physical effect called “acoustic cavitation” generated in the liquid is responsible for the cleaning process. Cavitations form when ultrasonic waves travel through liquid. When a sound wave travels through fluid it stretches and compresses the liquid to transmit the sound, as the amplitude of such sound waves increase to a critical level the negative pressures create cavities in the water. As these cavities collapse high temperatures and large forces are generated in a very localized area,

the accumulative effect of millions of these collapsing cavities is responsible for the cleaning action and are particularly effective when used with the correct detergent/solvent. Cavitation takes place where ever the liquid comes into contact with the object being cleaned, for example; fine recesses/cracks and obscured chambers to clean where many other cleaning methods cannot reach.

## 3 Objects Ultrasonics Can and Can't Clean

Ultrasonic cleaners can be used to clean just about anything. The list below names the most common items cleaned by ultrasonics: Most objects can be processed in an ultrasonic tank but there are some exceptions including some precious stones and electronic components. We advise checking with the manufacturer of the objects to be cleaned whether they are suitable for ultrasonic cleaning.

- Taps, Dies, Milling cutters, Engine Blocks, Carburetors, cylinder heads, Medical equipment/instruments (ultrasonic cleaning does not sterilize, it must be followed by sterilisation in an autoclave)

  PCBs/assemblies (clean with caution, see operational advice below)
  Golf clubs, Ceramics, Paint spray guns, Printer heads, Diving respirators, Bike parts and much more.

## 4 Operation Advice:

**1.**Never connect the device without water.

**2.**Allow at least one inch between the tank bottom and the beaker or receptacle for adequate cavitation.

**3.**Do not place objects directly in the bottom of the tank, this will irreparably damage the transducers.

**4.**The more objects you clean and the less effective the cleaning will be. Avoid overlapping objects. Always leave space around objects to clean.

5.Use the lid as far as possible to limit evaporation.

**6.**Heat up to 50-60°C is recommended, Do not over 80°C. Too high temperature or continuous working could damage delicate materials

**7.**Fully immerse item into the water. Ensure there are no air pockets in recesses and blind holes& chambers to ensure the ultrasonic effect can propagate to all surfaces of the item being cleaned.

8.Do not operate ultrasound for more than one hour continuously. Allow a break time of at least 15 minutes every hour.

**9**.Highly acidic, strongly alkali detergents, flammable products or detergent is forbidden. This may cause corrosion on a stainless steel tank or even on the outside of the tank.

**10.**Allow the cleaner to heat up faster, to a higher temperature, and avoid excessive liquid evaporation.However,obstructingthecoverventswillcausethecleanertooverheat.

## 5 SeriesTank




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| Model | Tank size(mm) | Capacity (L) | Ultrasonic power(W) | Temp (℃) | Timer (min/H) | Frequency |
|---|---|---|---|---|---|---|
| **T-12S** | 500x300x250 | 38L | 600W | 20-80C | 1-99 hours | 40K or 28Khz |
| **T-18S** | 500x400x300 | 66L | 900W | | | |
| **T-24S** | 500x400x350 | 77L | 1200W | | | |
| **T-30S** | 600x450x400 | 108L | 1500W | | | |

## 6 Use Direction

**Step One**: Place ultrasonic cleaner on a flat stable surface.

**Step Two**: Add water and chosen cleaning solution to the bath (cleaning agents are not always necessary) to a level where it will not overflow when the item to be cleaned is added. Put cleaning objects in the basket, then to the tank.

IMPORTANT!!
Never connect the device without water or less than 2/3 of water in the tank, it may cause irreparable damage to the device.

**Step Three**: Plug machine to socket, connect machine to electricity system.

**Step Four**: Digital displays on the control panel should turn on, set up time and temperature.
We strongly suggest to use a temperature between 50-60°C , Not over 80 °C； higher than this will decrease the effectiveness of the cleaner.
Timer: 30-45 minutes.

**Step Five**: Press the on/off button to begin wash cycle. To end the cycle before the timer has counted down press the on/off button again.
There is a power adjust button allowed to choose weak to strong mode to fit various cleaning items.

**Step Six**: Switch off the power after use.

## 8 Optimizing Your Cleaner

Turn all the buttons OFF after use, turn off the power and disconnect the power supply.

Drain the tank after the bath temperature is low (<35 °). Never leave the appliance connected to a power socket when the tank is empty.

Always empty and clean a tank that contains metal deposits. The particles detached from the cleaned objects piles in the bottom of the bath, decreasing the action of the next cleaning and have a risk of oxidize the tank or pierce it with the vibrations.

Empty and clean with a soft cloth then cleanly dry the tub when the device is no longer used (at least every night to avoid a oxidation of stainless steel). This will also ensure that you always have a clean bath when you use it again. Some models have a drain tap on the side, always make sure that this tap is closed during the next filling.

· Overload - do not rest any items on the tank bottom. Weight on the tank bottom dampens sound energy and will cause damage to the transducer. Instead, use a tray and/or beaker positioning cover to support all items.

## 9 Warranty card:

| Ultrasonic cleaner | |
|---|---|
| Model | |
| Out-of-factory | |
| Machine no. | |
| Working volt | |
| Max current | |
| Ultrasonic frequency | |

**Maintenance record**

| | **Maintenance way** | **Replaced parts** | **P.I.C** |
|---|---|---|---|
| 01 | | | |
| 02 | | | |